

obvious to use controlled gates, described by Nicol for use in delaying the propagation of signals in a multiplier, to delay the propagation of signals in a wave digital filter.

Applicant respectfully traverses the rejection. The following paragraph from MPEP 2143 states three basic criteria which must be met in order to establish a *prima facie* case of obviousness.

"First there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations".

Regarding the first requirement, applicant respectfully points out that the Examiner did not bring forth any reason why it would be obvious to combine Nicol with Fettweis or Schwartz, and did not bring any reference which suggests such a combination. Wave digital filters (WDFs) substantially differ from multipliers, although they are both electrical circuits. It is noted, for example, that the currents in WDFs pass back and forth through some of the adapters of the WDFs at least twice, while the currents in multipliers propagate in a single direction.

Regarding the second requirement, applicant respectfully points out that the timing issues required for gating signals in a WDF as described in the present patent application, are different from the timing issues of the gating suggested in Nicol for a multiplier. The Examiner, however, did not bring forth any explanation why an application of Nicol for WDFs would be expected to succeed, despite these differences.

Regarding the third requirement, applicant respectfully points out that some of the dependent claims include features not described in any of the references cited by the Examiner. Particularly, claims 2 and 27 require using at least one latch as the controlled gate. Claims 7 and 25 require at least one delay unit which delays the propagation of a value into an input of one of the adapters for a predetermined time. Claims 9 and 22 require that the delay unit which delays the value for a predetermined time is an uncontrolled delay element. Claim 11 requires that the delayed value is a valid value. New claim 41 requires that the at least one controlled gate delays the propagation of the value until a predetermined number of changes in the value occur. Applicant did not find a mention of any of these requirements in any of the references cited by the Examiner.

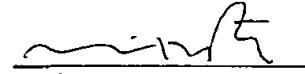
In view of these remarks, applicant respectfully submits that a *prima facie* case of obviousness was not established regarding the claims of the present application. Applicant further

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notes that Fettweis comprises a comprehensive overview of WDFs (theory and practice), but does not mention or hint to the present invention. Furthermore, as described in the background of the present application, attempts have been made to reduce the current consumption of WDFs but, to the best of applicants knowledge, did not suggest the present invention.

In view of the above remarks, applicant submits that the claims are patentable over the prior art. Allowance of the application is respectfully awaited.

Respectfully submitted,  
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